

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claim 1 (currently amended): Cell culture apparatus comprising:

a flexible culture chamber; and

a wave induction mechanism which is compatible with large scale up of a culture medium to an amount of at least 1000 L, the wave induction mechanism comprising: a plate that lifts up only a portion of the culture chamber, wherein the portion of the culture chamber lifted by the plate is between 5 and 50% of the length of the culture chamber and is compatible with large scale up of a culture medium in an amount up to 1000 L.

Claim 2 (currently amended): Cell culture apparatus according to claim 1, wherein the wave induction system portion of the culture chamber lifted by the plate is between lifts up from 8 to 20% of the surface area of the lower partlength of the culture chamber.

Claim 3 (currently amended): Cell culture apparatus according to claim 1, wherein the wave induction mechanism lifts up part of the lower part of the culture chamber to an angle of 1 to 90° with respect to an initial position of the plate.

Claim 4 (original): Cell culture apparatus according to claim 1, wherein the culture chamber comprises means to circulate air.

Claim 5 (canceled).

Claim 6 (original): Cell culture apparatus according to claim 1, wherein the culture chamber is a flexible plastic bag.

Claim 7 (previously presented): Cell culture apparatus according to claim 1, wherein the culture chamber is filled from 10 to 80%.

Claim 8 (currently amended): A method for cultivating plant cells, animal cells, or microorganisms, the method comprising:

providing a cell culture apparatus that comprises a flexible culture chamber, and a wave induction mechanism which is compatible with large scale up of a culture medium to an amount of at least 1000 L, the wave induction mechanism comprising: a plate that lifts up only a portion of the culture chamber, wherein the portion lifted by the plate is between 5 and 50% of the length of the culture chamber and is compatible with large scale up of a culture medium in an amount up to 1000 L; and

cultivating plant cells, animal cells, or microorganisms in the cell culture apparatus.

Claim 9 (currently amended): A method for producing biomass cells, embryogenic plant cells, metabolites, secondary plant metabolites and/or recombinant molecules, the method comprising:

providing a cell culture apparatus that comprises a flexible culture chamber, and a wave induction mechanism which is compatible with large scale up of a culture medium to an amount of at least 1000 L, the wave induction mechanism comprising: a plate that lifts up only a portion of the culture chamber, wherein the portion lifted by the plate is between 5 and 50% of the length of the culture chamber and is compatible with large scale up of a culture medium in an amount up to 1000 L; and

growing biomass cells, embryogenic plant cells, metabolites, secondary plant metabolites and/or recombinant molecules in the cell culture apparatus.

Claim 10 (currently amended): Cell culture apparatus according to claim 1 wherein the wave induction mechanism lifts up part of the lower part of the culture chamber to an angle of 1 to 25° with respect to an initial position of the plate.

Claim 11 (previously presented): Cell culture apparatus according to claim 1 wherein the culture chamber is filled from 20 to 40%.

Claim 12 (new): Cell culture apparatus according to claim 1, wherein the wave induction mechanism comprises a motorized arm which raises the plate.

Claim 13 (new): The method according to claim 8, wherein the wave induction mechanism comprises a motorized arm which raises the plate.

Claim 14 (new): The method according to claim 9, wherein the wave induction mechanism comprises a motorized arm which raises the plate.

Claim 15 (new): Cell culture apparatus according to claim 1, wherein the plate has a width equal to the width of the culture chamber and a length equal to between 5 and 50% of the length of the culture chamber.

Claim 16 (new): The method according to claim 8, wherein the plate has a width equal to the width of the culture chamber and a length equal to between 5 and 50% of the length of the culture chamber.

Claim 17 (new): The method according to claim 9, wherein the plate has a width equal to the width of the culture chamber and a length equal to between 5 and 50% of the length of the culture chamber.